BRUHAT BANGALORE MAHANAGARA PALIKE
BYATARAYANAPURA DIVISION

Name of Work: Package No.02 (Package consists of 14 works).

3RD & PART BILL

TEST REPORTS

TEJUS CONSULTANTS
CONSULTING ENGINEERS AND DESIGNERS
No.58 MIG, 6th Cross, 3rd Main
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Bangalore-560079
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TEJUS
CONSULTANTS

Test Report on Cement

Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Benaka Developers & Project Pvt.Ltd.
Sample ID	Cement
Date of Sample Tested	09.12.2019
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	39 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	356 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	5 mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	27.50%	25 % to 35

Note:
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TEJUS CONSULTANTS

Authorised Signatory

As Hall. N.D

Assistant Executive Engineer
Kodigehalli Sub Division
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 092

TEJUS
CONSULTANTS

TEST REPORT					
Clients	BRUHAT BENGALORE MAHANAGARA PALIKE				
Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura				
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	Benaka Developers & Project Pvt.Ltd.				

SPECIFIC GRAVITY AND WATER ABSORPTION

FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Fine aggregate (River Sand/ M sand)	Proposed Use	PCC
Location/Source	At Site/Plant	Date of Sampling	09.12.2019
Period of Soaking	24 hours	Date of Testing	09.12.2019

Sl. No.	Test Property	TRIAL - 1	TRIAL - 2	TRIAL - 3	
A	Weight of sturated surface dry sample gm.	663	632	672	
B	Weight of oven - dry sample gm.	651	622	661	
C	Weight of Pycnometer Filled with water gm	1275	1275	1275	
D	Weight of Pycnometer + sample + water gm	1686	1682	1698	
E	Bulk specific gravity $\frac{B}{(C+A-D)}$	2.583	2.764	2.655	2.667
G	Absorption (%) $\frac{(A-B)*100}{B}$	1.843	1.608	1.664	1.705

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Kodigehalli Sub Division
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 092

TEJUS
CONSULTANTS

TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike
Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura
Consultants	Tejus Consultants, Bangalore
Contractor	Benaka Developers & Project Pvt.Ltd.

SIEVE ANALYSIS

Total Weight:	3000 gms		
Type of Material	Fine aggregate (River Sand/ M sand)	Proposed Use	concrete
Sample Location	At Site/Plant	Date of Sampling	09.12.2019
		Date of Testing	09.12.2019

IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing (Zone-II)
10.00 mm	0	0	0	100.00	100
4.75 mm	212	212	7.07	92.93	90 - 100
2.36 mm	312	524	17.47	82.53	75 - 100
1.18 mm	411	935	31.17	68.83	55 - 90
0.600 mm	486	1421	47.37	52.63	35 -59
0.300 mm	750	2171	72.37	27.63	8-30
0.150 mm	620	2791	93.03	6.97	0 - 10
Pan	209	3000			-

Remarks : Satisfactory / Not Satisfactory

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Bruhat Bangalore Mahanagara Palike
Bangalore - 560 092

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CONSULTANTS

TEST REPORT					
Clients	Bruhath Bangalore Mahanagara Palike				
Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura				
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	Benaka Developers & Project Pvt.Ltd.				
Total Weight in gm:	3000				
SIEVE ANALYSIS					
Type of Material	40 mm down size			Proposed Use	PCC
Sample Location	At Site/Plant			Date of Sampling	09.12.2019
				Date of Testing	09.12.2019
IS Sieve Size	Weight Retained in gm	Cum. Weight Retained in gm	Cumulative Weight Retained in %	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA-2007) % of Passing For Graded Aggregate of Nominal Size
80.00mm	0	0	0.00	100.00	100
63.00mm	0	0	0.00	100.00	-
40.00mm	82	82	2.73	97.27	95-100
20.00mm	1400	1482	49.40	50.60	30-70
10.00mm	971	2453	81.77	18.23	10-35
4.75mm	452	2905	96.83	3.17	0-5
Pan	95	3000	100.00	0.00	
Remarks :			Satisfactory / Not Satisfactory		

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CIVIL EXPERTS
ISO 9001:2015
CONSULTANTS & TESTING CENTER

Highway / Building Material Testing | Structural Strengthening Solutions
Quality Control / Assurance / Audit | Proof Checking (Structural Designs & Drawings)
Soil Stabilization and Shoring Services | Non - Destructive Testing

NABL ACCREDITED AS PER ISO/IEC 17025:2017

Job No.: CECTC/BD/QC/2019-20 Date: 14.12.2019

TEST RESULTS OF PHYSICAL PROPERTIES OF REINFORCEMENT STEEL

Client : **Bruhath Bangalore Mahanagara Palike,** Bangalore.
Contractor : **M/s. Benaka Developers & Project Pvt.Ltd.**
Name of Project : Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7, Byatarayanapura
Sample Identification : 8mm, 10mm Fe 500 TMT Bars
Technical Reference : IS 1786:2008, IS 1608:2005, IS 1599:1985 (Reaffirmed 2006)
Date of test: : 14.12.2019

Sl.No	Nominal size (dia in mm)	Mass per metre (kg/metre)	TENSILE STRENGTH		
			0.20 % proof stress/ yield stress ($N/mm^{2)}$	Tensile strength ($N/mm^{2)}$	Elongation, percent on gauge length
1	8	0.401	518	559	16
2	10	0.620	534	581	17

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For Civil Experts
Authorised Signature

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Bruhat Bangalore Mahanagara Palike
Bangalore South-2

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Mobile : +91 97429 59595 | Tel/Fax : 080 2632 2565 | Email : civilexpertsltd@gmail.com | URL : www.civilexperts.co.in

TEJUS
CONSULTANTS

TEST REPORT						
Clients	Bruhat Bangalore Mahanagara Palike					
Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura					
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore					
Contractor	Benaka Developers & Project Pvt.Ltd.					
Total Weight:	10000	gms				
SIEVE ANALYSIS						
Type of Material	**12.5 mm down size**		**Proposed Use**	Concrete		
Sample Location	Plant/site		**Date of Sampling**	16.12.2019		
			Date of Testing	16.12.2019		
IS Sieve Size (in mm)	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing**	
20.0	0	0	0	100	100	
12.5	582	582	5.82	94.18	90-100	
10.0	2286	2868	28.68	71.32	40-85	
4.75	6521	9389	93.89	6.11	0-10	
Pan	611	10000				

Remarks : ✓ Satisfactory / Not Satisfactory

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Bruhat Bangalore Mahanagara Palike
Bangalore - 560 092

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TEST REPORT					
Clients	Bruhat Bangalore Mahanagara Palike				
Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura				
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore				
Contractor	Benaka Developers & Project Pvt.Ltd.				
Total Weight:	10000	gms			
SIEVE ANALYSIS					
Type of Material	20 mm down size		**Proposed Use**	Concrete	
Sample Location	At Plant		**Date of Sampling**	16.12.2019	
			Date of Testing	16.12.2019	
IS Sieve Size	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing**
40.00 mm	0	0	0	100	**100**
20.00 mm	270	270	2.70	97.30	**95 - 100**
10.00 mm	4908	5178	51.78	48.22	**25 - 55**
4.75 mm	4132	9310	93.10	6.90	**0 - 10**
Pan	690	10000			
Remarks :	✓ Satisfactory / Not Satisfactory				

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TEST REPORT	
Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Benaka Developers & Project Pvt.Ltd.

SPECIFIC GRAVITY AND WATER ABSORPTION FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Sand/M sand	Proposed Use	Drain
Location/Source	At Plant/site	Date of Sampli	16.12.2019
Period of Soaking	24 hours	Date of Testing	16.12.2019

Sl. No.	Test Property		TRIAL - 1	TRIAL - 2	TRIAL - 3	Average
A	Weight of sturated surface dry sample gm.		683	654	667	
B	Weight of oven - dry sample gm.		671	644	656	
C	Weight of Pycnometer Filled with water gm		1275	1275	1275	
D	Weight of Pycnometer + sample + water gm		1705	1685	1695	
E	Bulk specific gravity	B	2.652	2.639	2.656	2.649
		(C + A - D)				
G	Absorption (%)	(A - B) *100	1.788	1.553	1.677	1.673
		B				

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Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura				
Consultants	Tejus Consultants, Bangalore				
Contractor	Benaka Developers & Project Pvt.Ltd.				
SIEVE ANALYSIS					
Total Weight:	**3000** gms				
Type of Material	**Fine aggregate (River Sand/M sand)**		**Proposed Use**	Drain	
Sample Location	At Plant/site		**Date of Sampling**	16.12.2019	
			Date of Testing	16.12.2019	
IS Sieve Size	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing (Zone-II)**
10.00 mm	0	0	0	100.00	**100**
4.75 mm	242	242	8.07	91.93	**90 - 100**
2.36 mm	290	532	17.73	82.27	**75 - 100**
1.18 mm	518	1050	35.00	65.00	**55 - 90**
0.600 mm	570	1620	54.00	46.00	**35 -59**
0.300 mm	650	2270	75.67	24.33	**8-30**
0.150 mm	562	2832	94.40	5.60	**0 - 10**
Pan	168	3000			**-**
Remarks :	Satisfactory / Not Satisfactory				

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Test Report on Cement

Project	Improvements to roads and drains from Bhuvaneshwarinagar Park via Gopalappa Layout to Cofee board Layout Park Road and Surrounding areas (Cubic Apartments Area) in Ward No.7,Byatarayanapura
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	Benaka Developers & Project Pvt.Ltd.
Sample ID	Cement
Date of Sample Tested	16.12.2019
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	39 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	376 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	4 mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	25.00%	

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